2 MINFILE NUMBER: 092B 006 ** Geology
NAME(S): TOD INLET, BRENTWOOD, BUTCHART GARDENS

STATUS: Past Producer Open Pit
NTS MAP: 092B11W UTM ZONE: 10
LATITUDE: 48 33 58 NORTHING: 5379120
LONGITUDE: 123 28 19 EASTING: 465190
ELEVATION: 0010 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: Centre of flooded quarry at Butchart Garden. From Victoria, follow Pat Bay Hwy #17 towards the Swartz Bay ferry terminal, and follow the Butchart Gardens signs. There is an entrance fee to the Gardens (well worth it), or visit Tod Inlet by turning S on Wallace Drive off Benvenuto Road. Park about 400m on, next to gate marked "Gowland - Tod Provincial Park". Walk 1 km to inlet. Lots of limestone in the old walls and ramparts above the jetty.

COMMODITIES: Limestone

MINERALS
SIGNIFICANT: Calcite
ASSOCIATED: Dolomite

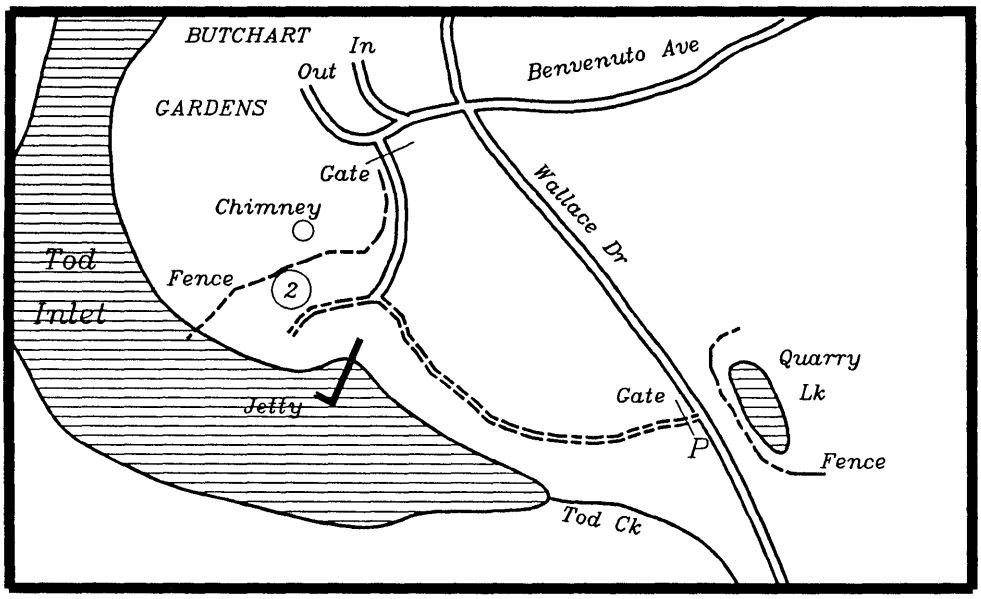
Limestone was produced from three quarries in this area between 1905 and 1921. The deposit comprises a series of limestone bodies that are up to 76m in width and 150m in length, hosted in greenstone and intruded by mafic dykes. They generally consist of fine-grained, dark bluish grey to white high calcium limestone. Approximately 837,000 tonnes of limestone were produced from the 3 quarries between 1905 and 1921. The numbers 1 and 2 quarries, located next to the plant on Tod Inlet, were largely exhausted. The Butchart Gardens presently encompass this site. The number 3 quarry was situated 1 km E of the plant, opposite the park gate on Wallace Drive, and is flooded and fenced.

On the W shore of Tod Inlet (Willis Pt) a 6-30m thick calcium limestone bed striking 150 degrees for at least 45m and dipping 30-35 degrees W remains undeveloped.

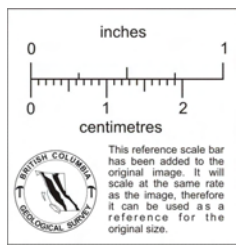
SCIENCE PROJECT

Find a small piece of limestone (about the size of a golf ball). At Tod Inlet, it's gray with white scratches. Place in the bottom of a narrow glass jar, and just cover it with white grape vinegar (not apple). Notice the bubbles. Leave in a warm spot. As the vinegar evaporates over a week, white crystals of aragonite (a form of calcite) grow on the rock and glass. When dry, do it all over again, only this time, add food colouring!

Explanation: limestone is an alkali (base), vinegar is an mild acid. As the water molecules evaporate, the free carbonate ions re-align, forming feathery crystals.


BUTCHART
GARDENS
In
Out
Benvenuto Ave
Gate
Chimney
Wallace Dr
Tod
Inlet
Fence
2
Jetty
Quarry
Lk
Gate
P
Fence
Tod Ck

Map Site No.: 2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GEOLOGICAL SURVEY
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